

ENGINEERING CHANGE NOTICE **DART AEROSPACE LTD**

MPP

Date: 13.04.08	Job No.:	ADR Yes/No: Y	ADR Date: 12.12.10	ECN #: 13- 510
Product No.: D105-674		Created By: DB	Approved By:	
Product Name: DART SKIDTUBES		Checked By:		

Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)
Director of Operations	Y	NF	
Production Manager / Coord.	Y	LL/MF	
Purchasing Coord.	Y	CL	
Production Engineering Coord.	Y	DD/JLM	
Production Engineering Coord.	N	DL	
Customer Order Processing	N	RM/CA	

Distribution	Reqd	Resp	Initial / Date (YY/MM/DD)
DQA / QA Coord.	Y	PS	
QC Coordinator	Y	ED	
Customer Support	Y	SW/LM	
Customer Technical Support	Y	MB/DS	
Marketing	N	HM	

Reason for Change: CUSTOMER REPORTS OF PREMATURE CORROSION, CHANGE TO STAINLESS STEEL

Documents Affected: D2970 Rev B, D2974 Rev B, D2975 Rev B, MDL-D105-674 Rev C

PAPERWORK UPDATE ☐ PARTS MUST COMPLY ☒ PREVIOUS PARTS SATISFACTORY ☐

#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	N			
5	Update Master Document List (MDL)	Y	DB	MDL-D105-674 Rev C	DB 13.04.08
6	Update Product Compatability Matrix	N			
7	Create Eurocopter Form (FEE)	N			
8	Notify TC / FAA of Change	N			
9					

#	Document Control Actions	Reqd	Resp	Notes	Complete
10	Move Electronic Files/Design Journal	Y	KJ		
11	Update Product Specification Files	N			
12	Update Approved/Preliminary Dwg PDF Files	Y	KJ		13.04.08
13	Update Document Record (DR)	N			
14	Update Product Development Summary	N			
15	Update QSI 021 and/or STC Approval List	N			
16	Create/Update Parts / STC Database	N			
17	Update / Verify ARC Database	N			
18	Create / Update Change Record Form / Item Card Database	Y	KL	D105674-011@CHG 003	13.04.08
19	Create / Update PPP's	Y	KJ		
20	Red Decals required?	Y	KJ		
21	Update Document Control Database / Laminated Dwgs	N	I		
22	Update Grey Project / Electronic Binder PDF Files	Y	KJ		13.04.08
23	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		13.04.08
24	Manufacturing Licensing Agreement Update				

Description / Action:

Rework SkidTubes to CHG 003, Scrap all Rev A Wearplates.

D2970
D2974
D2975

94006✓
94002✓
95508✓
95509✓

D105674-016
updated
13.04.08

ECN Verified & Complete: _____ Date: _____

List Lots

April-08-13 1:38:38 PM

Page 1 of 2

Criteria : Item ID: 'D2970-1', 'D2970-3', 'D2971', 'D2972', 'D2973', 'D2974', 'D2975' All Locations All Warehouses All Quantity

Item ID Item Name	Warehouse ID Location ID	Lot Number	Last Trans Date	Lot Qty	Shelf Life Dt	Type Code	Comments
D2970-1 Wearplate	Main Warehouse FP002	48213	12/27/12	3.0000		QC21	
	Main Warehouse FP002	94416	2/26/13	8.0000		QC21	
		Total:		11.0000			99462
D2970-3 Wearplate	Main Warehouse FP002	80091	9/24/12	6.0000		QC21	
	Main Warehouse FP002	86867	11/30/12	4.0000		QC21	
		Total:		10.0000			99463
D2971 Cross Bolt Spacer	Main Warehouse LG001	74720	3/26/13	16.0000		QC21	
	Main Warehouse LG002	86730	11/21/12	19.0000		QC21	
		Total:		35.0000			
D2972 Bushing	Main Warehouse ST022	86834	2/01/13	33.0000		QC21	
	Main Warehouse ST022	91742	2/01/13	19.0000		QC21	
	Main Warehouse ST022	95856	2/01/13	24.0000		QC21	
		Total:		76.0000			
D2973 Cross Bolt Spacer	Main Warehouse LG002	80092	1/31/13	31.0000		QC21	
	Main Warehouse LG002	86858	3/26/13	7.0000		QC21	

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>
--	---	---

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

List Lots

April-08-13 1:38:38 PM

Page 2 of 2

Criteria : Item ID: 'D2970-1', 'D2970-3', 'D2971', 'D2972', 'D2973', 'D2974', 'D2975' All Locations All Warehouses All Quantity

Item ID Item Name	Warehouse ID Location ID	Lot Number	Last Trans Date	Lot Qty	Shelf Life Dt	Lot Code	Type Code	Comments
D2973 Cross Bolt Spacer	Main Warehouse LG002	94172	1/31/13	20.0000		QC21		
	Main Warehouse LG002	95876	1/31/13	24.0000		QC21		
		Total:		82.0000				
D2974 Packer	Main Warehouse ST022	71997	9/25/12	33.0000		QC21		
		Total:		33.0000				99465
D2975 Wearshoe	Main Warehouse ST500	86784	2/22/13	8.0000		QC21		
	Main Warehouse ST500	95513	2/22/13	12.0000		QC21		
		Total:		20.0000				99466

April-08-13 1:38:38 PM

List Lots

Page 2 of 2

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other